



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,034	12/22/2004	Yoshikazu Takashima	275871US6PCT	6992
22850 7590 12/23/2010 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER TOPGYAL, GELEK W				
ART UNIT 2481		PAPER NUMBER		
NOTIFICATION DATE 12/23/2010		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/519,034

Applicant(s)

TAKASHIMA ET AL.

Examiner

GELEK TOPGYAL

Art Unit

2481

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 24-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/24/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 9/24/2010 have been fully considered but they are not persuasive.
2. In re pages 11-13, the applicants present the central argument that Okada or Jung ('402) fails to teach the newly recited limitations. In arguing, the applicants refer to Fig. 13 of Jung ('402) for indication that AV information files are recorded in a non-interleaved format.
3. In response, the examiner respectfully disagrees. The examiner previously referred to Figures 4-7 of Jung in response to the AV having reproduction paths which includes at least one AV segment not included in any other of the reproduction paths. Paragraphs 12-14 teaches of a plurality of AV segments (VOB k, cells 1-2 and VOB l, cells 1 and 2 in Fig. 9) which are interleaved ("ILVU" Interleaved Blocks) in increments of a plurality of consecutive angle change units (Fig. 9 teaches an example wherein VOB k and VOB l are interleaved, therefore in this instance at least two consecutive angle change units are met. The number of angle change units can be set according to the author of the DVD and therefore can be at least up to 9 (as per DVD standard)), being a smallest increment in which angles can be changed (paragraphs 13-14 teaches of an angle change can occur between each ILVU, hence meeting the claimed "smallest increment" of 1 ILVU size). Therefore, the newly added limitations are met by the proposed combination of Okada and Jung.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. **Claim 21** is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent and recent Federal Circuit decisions indicate that a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claims recite a series of steps or acts to be performed, the claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example, an information processing method for use with an information processing apparatus for recording an AV stream to a recording medium, said method comprising: 1) determining, 2) generating and controlling 3) is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine.
6. **Claims 1-20 and 24-28** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. It is noted that the specification discloses: “The series of steps and processes described above may be executed either by hardware or by **software**” (page 93 of instant specification). As evidenced by the specification it appears that said claimed apparatus is capable of reading on software

and as such does not fall into any statutory class of invention. Computer programs claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

7. **Claim 22** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

8. The claim recites, *inter alia*, "A computer readable program storage medium which stores a program for causing a computer to perform a method ..." After close inspection, the Examiner respectfully notes that the disclosure in page 94 of the instant specification recites that a "storage medium has the programs recorded thereto as needed through wired or wireless communication means ... internet..". It appears the storage medium can be of a transitory type, and therefore reads of an a signal, which does not fall into the four statutory classes of 35 USC 101. However, the Examiner respectfully submits a claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 U.S.C. § 101 by adding the limitation "non-transitory" to the claim. Such an amendment would typically not raise the issue of new matter, even when the specification is silent because the broadest reasonable interpretation relies on the ordinary and customary meaning that includes signals *per se*. For additional information, please see the Patents' Official Gazette notice published February 23, 2010 (1351 OG 212).

35 USC § 112, sixth paragraph

MPEP 2181 discloses that a claim limitation will be presumed to invoke 35 U.S.C. 112, sixth paragraph if it meets the following 3-prong analysis: (A) the claim limitations must use the phrase "means for" or "step for;" (B) the "means for" or "step for" must be modified by functional language; (C) the phrase "means for" or "step for" must not be modified by sufficient structure, material, or acts for achieving the specific function.

9. With regards to claims 1, 6-8, 13 and 19, it is noted that said claims have invoked 35 U.S.C. 112, sixth paragraph and meet the 3-prong analysis. Regarding said claims, it is noted that said "means for generating AV stream" limitation is considered to read on the "stream analysis unit 18" in page 23 and Fig. 4 of the instant specification; "means for controlling" limitations are considered to read on "control unit 23" in Fig. 4 of the instant specification, which controls the entire operation of the apparatus 1, including the "stream analysis unit 18"; "means for recording" is considered to read on "writing unit 22" in Fig. 4 and page 19 of the instant specification; "means for admitting an input" is considered to read on "User interface input/output 24" in Fig. 4 and page 27 of the instant specification; "means for storing" is considered to read on "memory 34" in Fig. 4 and page 24 of the instant specification; "means for reproducing" is considered to read on "reading unit 28" in Fig. 4 and pages 26-27 of the instant specification; "means for packetizing" is considered to read on "source packetizer 19" in Fig. 4 and page 19 of the instant specification.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 1-22, and 24-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada et al. (US 6,922,521) in view of Jung et al. (US 2004/0076402)

Regarding claims 1, 21-22 and 24-25, Okada et al. teaches an information processing apparatus (Fig. 18-20, Apparatus) for recording an AV stream to a recording medium (Fig. 18-20, DVD-RAM 100), said information processing apparatus comprising: controlling means for controlling the generation of said AV stream by said generating means (col. 7, lines 25-33 teaches of AV files. Col. 15, line 62+ teaches a system controller 1902 that controls the recording apparatus, which meets the claimed "controlling means"); and recording means for recording to said recording medium said AV stream generated by said generating means (col. 7, lines 25-33 teaches of AV files. Col. 16, lines 10-15 teaches a drive 1911 that meets the claimed "recording means"); wherein said AV stream is constituted by data blocks making up predetermined units (col. 11, lines 22-43 teaches of VOBs and VOBUs which meet the claimed "data blocks"); and wherein said controlling means controls parameters for said AV stream generated by said generating means as well as a layout of said data blocks, in accordance with information indicative of reproducing characteristics in effect when said AV stream recorded on said recording medium is reproduced therefrom (Figures 11-16 shows the structure of PGCI which defines the claimed "layout" of the VOBs and

VOBUs for reproduction. Col. 15, line 62+ teaches a system controller 1902 that controls the recording apparatus and therefore, the system controller 1902 controls the recording process of generating "PGCI" information and "VOBs/VOBUs").

Although the system of Okada implements the plurality of reproduction paths on a DVD standard as discussed above, it does not particularly teach the means for generating said AV stream constituting each of a plurality of reproduction paths, each reproduction path including a plurality of AV segments on a timeline, every reproduction path on the recording medium including at least one AV segment not included in any other of the plurality of reproduction paths, and the recording means interleaving the plurality of consecutive angle change units being a smallest increment in which angles can be changed.

In an analogous DVD standard art, Jung et al. teaches in paragraphs 9-11 and Figures 4-7 of an AV stream that constitutes a plurality of reproduction paths. The plurality of reproductions that make up the AV stream is met by the plurality of angle data stored in the multi-angle portion. The plurality of reproduction paths therefore consists of at least one AV segment (the multi-angle data) that is unique to that particular reproduction path. The recording apparatus' controller meets the claimed means for generating as it performs the ability to generate a plurality of reproduction paths for the recording apparatus. Furthermore, paragraphs 12-14 teaches of a plurality of AV segments (VOB k, cells 1-2 and VOB l, cells 1 and 2 in Fig. 9) which are interleaved ("ILVU" Interleaved Blocks) in increments of a plurality of consecutive angle change units (Fig. 9 teaches an example wherein VOB k and VOB l are interleaved,

therefore in this instance at least two consecutive angle change units are met. The number of angle change units can be set according to the author of the DVD and therefore can be at least up to 9 (as per DVD standard)), being a smallest increment in which angles can be changed (paragraphs 13-14 teaches of an angle change can occur between each ILVU, hence meeting the claimed "smallest increment" of 1 ILVU size).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the multi-angle storage capability and the ability to store multi angle data in an interleaved manner according to the DVD standard as taught by Jung et al. into the system of Okada because such incorporation allows for the benefit of viewing a particular scene from multiple angles (Jung: paragraph 14 "user issues a command to change angles") and therefore increase the user friendliness of the system.

As to claim 25, it should be noted that similarly, a first section of a first reproduction path in Jung can be the same as a second reproduction path e.g., the first five minutes of a video program maybe identical up to the section of the AV stream where the multi-angle data presents itself, therefore, the start and end times for that portion of the video program is identical in both reproduction paths.

Regarding claim 2, Okada teaches the claimed wherein said information indicative of said reproducing characteristics denotes relations between jump distances between said data blocks recorded in separate locations on the hand, and jump times corresponding respectively to said jump distances on the other hand, for use during reproduction of said AV stream in keeping with said reproduction paths (Fig. 12,

includes a plurality of Start and End times in each "Cell I" information, the End time of a first and the Start time of the following Cell I information creates a jump in the data blocks during reproduction).

Regarding claim 3, Okada teaches the claimed as discussed in claim 1 above, and additionally Okada teaches the claimed wherein said parameters for said AV stream includes a "rate" of said AV stream (col. 2, lines 21-29 teaches various bit rates regarding the AV data).

Claims 4 and 7 are rejected for the same reasons as discussed in claim 1 above since the PGCI information are recorded onto the recording medium and are subsequently used for reproduction of the AV stream, furthermore, col. 17, lines 29-35 teaches a drive 1911 meeting the claimed means for storing that records the data onto DVD-RAM 100.

Regarding claims 5-6, Okada teaches the claimed as discussed in claim 1 and furthermore, the AV stream's data is stored in the format of MPEG using VOBs and VOBUs as a finite block of information (col. 11, lines 22-63 teaches the basic structure of VOBs and VOBUs). The PGCI includes Cells that determines a logical order in which the AV stream is reproduced (col. 8, lines 5-44). Furthermore, during reproduction, the PGCI is used to determine which VOB/VOBU is to be reproduced. As to claim 6, the broadly claimed "parameter" to be given priority can range from the selection of playback (Col. 18, lines 1+) or the mere action of choosing to create a user defined PGCI, wherein only a selected area of the video is to be used for reproduction. The user interface 1901 meets the claimed means for admitting an input.

Regarding claim 8, Okada teaches in col. 18, lines 1+ of the ability to reproduce the video stored on the recording medium according to the PGCI. Col. 18, lines 27-36 teaches of a drive 1911 meeting claimed means for reproducing

Regarding claims 9 and 15, Okada teaches the claimed wherein said controlling means generates first management information which includes map information for indicating locations of starting points of said AV stream on each of said reproduction paths as well as locations of entry points of the AV streams and which is used to control AV stream status (Fig. 12, includes a plurality of Start and End times in each "Cell I" information, the End time of a first and the Start time of the following Cell I information creates a jump in the data blocks during reproduction), said controlling means further generating second management information which includes designation information for designating a starting point and an end point of each of said AV streams and for designating the AV stream for each of said reproduction paths and which is used for reproduction management (Fig. 12, includes a plurality of Start and End times in each "Cell I" information, the End time of a first and the Start time of the following Cell I information creates a jump in the data blocks during reproduction); and wherein said recording means further records said first management information and said second management information to said recording medium (col. 7, lines 35-41 teaches the all the PGCI information are recorded on the recording medium).

Regarding claims 10 and 16, Okada teaches the claimed wherein said generating means encodes said AV stream in such a manner that said AV stream concludes within each of segments delimited by said change points (Fig. 12, the PGCI

information is delimited by a plurality of "Cell I" sections); and wherein said controlling means creates a correspondence table describing relations of correspondence between presentation timestamps of said entry points on the one hand and packet numbers on the other hand (col. 10, lines 51+ and col. 11, lines 11-21 teaches of T map information that is used to find the location of the data on the recording medium).

Regarding claims 11 and 17-18, Okada teaches the claimed in col. 11, lines 22-42 of VOBs/VOBUs which includes a set of video frames which meets the claimed "group of pictures".

Regarding claims 12, 13 and 19, Okada teaches in col. 17, lines 14+ that an MPEG transport stream is recorded onto the recording medium and is used to generate the management information of D_VOB. Therefore, the D_VOB's ID (D_VOB_ID in col. 22-32) is in direct relation to the MPEG transport stream, which includes both the audio and video packets. The packetizing means is met by the control 1902 that controls the drive 1911 to write the multiple VOBUs (col. 17, lines 14-40).

Regarding claim 14, Okada teaches that during the recording procedure, the "random access indicator" is used to determine a start and facilitates the encoding of a new VOB (col. 12, lines 40-52). Therefore, these points in the video are locations where a reproduction path is switchable.

Regarding claim 20, as discussed above in claims 10 and 16, Okada teaches a T map that is created.

Regarding claim 26, Jung teaches the claimed in paragraph 14 wherein "a jump must be made to the position of data for the changed angle. The extent of jumping is

determined in ILVUs". Therefore the number of ILVUs is based on the claimed "access speed", which is met by the "jumping" and reproducing capability based on the ILVUs in Jung.

Regarding claim 27, Jung teaches the claimed in paragraph 15 wherein "the ILVU angle position data ... provides information regarding the ILVU data for angle #n through a link in a current ILVU data". Paragraph 13 teaches of "ILVU position data", which in combination The "information regarding the ILVU data" meets the claimed management information since it applies to a plurality of the ILVUs.

Regarding claim 28, Jung teaches the claimed in paragraph 16 of a "DVD authoring process for multi-angle data" which suggests a user capable of selecting up to 9 angles (paragraph 15 teaches up to 9 angles can be accommodated).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GELEK TOPGYAL whose telephone number is (571)272-8891. The examiner can normally be reached on 8:30am -5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter-Anthony Pappas can be reached on 571-272-7646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gelek Topgyal/
Examiner, Art Unit 2481

/Peter-Anthony Pappas/
Supervisory Patent Examiner, Art Unit 2481